

Application No.	Applicant(s)		
09/502,120	Blumhagen et al.		
Examiner	Group Art Unit		
5. A. P. 1970	3881		

*U.S. GPO: 1998-454-457/97505



UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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02/10/00

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EXAMINER

NGUYEN, K

FENWICK & WEST LLP
TWO PALO ALTO SQUARE
PALO ALTO CA 94306

ART UNIT

PAPER NUMBER

2881

DATE MAILED:

10/22/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trad marks

- 1) This reissue application was filed without the required offer to surrender the original patent or, if the original is lost or inaccessible, an affidavit or declaration to that effect. The original patent, or an affidavit or declaration as to loss or inaccessibility of the original patent, must be received before this reissue application can be allowed. See 37 CFR 1.178.
- 2) This application is objected to under 37 CFR 1.172(a) as lacking the written consent of all assignees owning an undivided interest in the patent. The consent of the assignee must be in compliance with 37 CFR 1.172. See MPEP § 1410.01.

A proper assent of the assignee in compliance with 37 CFR 1.172 and 3.73 is required in reply to this Office action.

- 3) This application is objected to under 37 CFR 1.172(a) as the assignee has not established its ownership interest in the patent for which reissue is being requested. An assignee must establish its ownership interest in order to support the consent to a reissue application required by 37 CFR 1.172(a). The assignee's ownership interest is established by:

(a) filing in the reissue application evidence of a chain of title from the original owner to the assignee, or

(b) specifying in the record of the reissue application where such evidence is recorded in the Office (e.g., reel and frame number, etc.).

The submission with respect to (a) and (b) to establish ownership must be signed by a party authorized to act on behalf of the assignee. See MPEP § 1410.01.

An appropriate paper satisfying the requirements of 37 CFR 3.73 must be submitted in

reply to this Office action.

- 4) Applicant is notified that any subsequent amendment to the specification and/or claims must comply with 37 CFR 1.173.

The amendments filed on October, 10 and November 20, 2000 propose respectively amendments to claims 35-41 and 44-49, and the specification that do not comply with 37 CFR 1.173, which sets forth the manner of making amendments in reissue applications. A supplemental paper correctly amending the reissue application is required.

- 5) The reissue oath/declaration filed with this application is defective because it fails to contain a statement that the inventor is a "the original, first and sole" or "the original, first and joint" inventor as required by 37 CFR 1.63(a)(4) and further fails to contain a statement that all errors which are being corrected in the reissue application up to the time of filing of the oath/declaration arose without any deceptive intention on the part of the applicant. See 37 CFR 1.175 and MPEP § 1414.

- 6) Claims 9-51 are rejected as being based upon a defective reissue declaration under 35 U.S.C. 251 as set forth above. See 37 CFR 1.175.

The nature of the defect(s) in the declaration is set forth in the discussion above in this Office action.

7) ***Objected Informalities***

The disclosure is objected to because of the following informalities:

In The Claims

Claim 12, line 1, "to flood" should be changed to -- floods --.

Claim 17, line 2, ";" should be deleted.

Claim 33, line 2, after "applying" should be inserted with -- an --.

Claim 46, line 2, after "for" should be inserted with -- detecting --.

Appropriate correction is required.

8) ***Objected Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the means for obtaining the voltage contrast data in the form of an image as recited in claim 18; means for controlling the temperature of the structure during the test as recited in claim 20; the grid electrode as recited in claim 25; and a sample plate and the voltage applied to the sample plate as recited in claim 27 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

9) ***Rejection Under 35 U.S.C. 112, First Paragraph***

Claims 9-51 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification is completely silent for representing the added material "applying an electric field perpendicular to a surface of the structure ... analyzing the data to determine the functionality of the element" as recited in parts b), c), and d) of claim 9; "applying the electric

field so as to charge the element with a negative potential" as recited in claim 16; "detecting resulting secondary electrons so as to obtain voltage contrast data" as recited in claim 17; "obtaining the voltage contrast data in the form of an image" as recited in claims 18 and 40; "controlling the temperature of the structure during the test" as recited in claim 20; "an electric field generator ...the potential and polarity of the charged applied to the element" and "a detector ... the charged particle beam" as recited in parts b), and d) of claim 21; "a sample plate on ... the electrode and the sample plate" as recited in claim 27; "the sample plate is grounded and the voltage at the electrode is selected to determine the potential and polarity of charging" as recited in claim 28; "the electrode is grounded and the voltage at the sample plate is selected to determine the potential and polarity of charging" as recited in claim 29; "the voltage can be varied to determine the potential and polarity of the charge applied to the element" as recited in claim 30; "a display which displays the voltage contrast data" as recited in claim 32; "applying electron beam ... determine the functionality of the structure" as recited in parts a), b), and c) of claim 33; "the electron beam ... 20 V relative to the semiconductor structure" as recited in claim 34; "probing the region ... at which the region is probed" as recited in parts b) and c) of claim 35; "a probe ... for such structures" as recited in parts b) and c) of claim 44; "means for analyzing voltage contrast data compares ... of another device" as recited in claim 48; and "a secondary particle detector ... for that structure" as recited claim 49. Therefore, the examiner don't understand what and/or how is the device that determines charging potential and polarity of the structure? what is the device that measures the voltage contrast data in the form of an image?

How is the element applied by an electric field that generates with a negative potential by applying an electron beam? How are secondary electrons representing the voltage contrast data? How is the temperature of the structure effected to the test? How are the potential and polarity of charging effected by applying relative voltages to the sample plate and the electrode? How is the region applied by charge that is at a significantly lower resolution than the resolution at which the region is probed?

Clarification without the introduction of new matter is required.

10) Claims 9-51 of this application has been copied from U.S. Applications No. 08/892,734, 08/782,740 and 09/012,277 for the purpose of an interference.

Applicant has failed to specifically apply each limitation or element of each of the copied claim(s) to the disclosure of the application.

Applicant is required to specifically apply each limitation or element of each of the copied claim(s) to the disclosure of the application.

11) For the above stated rejections/reasons, the interference will not be set up at this time as requested.

12) The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) Grobman discloses an electron beam system with reduced charge buildup;

2) Miyoshi et al. disclose an apparatus for testing and measuring the voltage contrast in a semiconductor device;

3) Sakai discloses an electron beam used to neutralize a specimen; and

4) Tanaka discloses an electron beam apparatus for detecting defects in a mask.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner *Kiet T. Nguyen* whose telephone number is (703) 308-4855.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Papers related to Art Unit 2881 applications **only** may be submitted to Art Unit 2881 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "**DRAFT**". The faxing of such papers must conform with the notice published in the Official Gazette, 1096 **OG** 30 (November 15, 1989). The Art Unit 2881 Fax Center number is (703) 308-7723.

K.T.N/Primary
September 26, 2001

Kiet T. Nguyen
KIET T. NGUYEN
PRIMARY EXAMINER